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Precautions for Operation

- Please read the User's Manual and the Installation and Parts Manual carefully before operating X-531.
- Only the qualified technician can operate the Wheel Aligner.
- The operator must have knowledge of computer application and basic theory of wheel alignment.
- The power voltage of X-531 is AC220V±10% 50±1Hz / AC110V±10% 60±1Hz（It can be customized according to the requirements of customer）. The 3-terminal socket must be used, and the earth terminal must be well grounded. If the power voltage is not stable, please purchase and use AC voltage stabilizer.
- X-531 is operated with image sensing. Do not stop the light beam between sensors. Avoid reflection light of the ground and direct light to the probe rod while testing.
- Charge the probe rod for 4 hours if it is not operated for over 30 days.
- The probe rods are precision parts of the wheel aligner. Do not plug or unplug the connecting cable when the power is turned on. Otherwise, the built-in sensor may be broken. Special care should be taken during installation and operation to prevent the casing from being distorted and the internal parts from being damaged.
- Install the lift according to specifications before installing X-531, for it is necessary to lift the vehicle when adjusting vehicle wheels. The vehicle may need lift for two times for compensation of rim run-out. Check the lift regularly for fixedness and levelness to ensure personal safety and correct measurement. Remove the obstacles around the lift for convenient operation.
- Don't place X-531 on a vibrated object or an oblique surface. Avoid direct sunlight and moisture.
- Avoid splashing water on the surface of X-531, for it may cause permanent damage when entering the system.
- The wires inside the cabinet and the probe rod sensors are connected compactly. Any disconnection may cause damage to the sensor. Damage due to unauthorized disconnection is not covered by warranty.
- Do maintenance periodically to X-531 for ensuring accuracy of measurement.
- Turn off the power after operation. Check all bolts and parts after maintenance, and tighten the slackened bolts and parts in turn for safety.
- Check the packing list before installing. Do not hesitate to contact LAUNCH or LAUNCH distributors for any questions.

Unpacking

X-531 is delivered to the customers in two cartons: a cabinet box and an accessory box.

Remove Cabinet Box

The cabinet box is 670mm×745mm×1754mm in size. There is a PC set, keyboard, mouse, radio main emitter and receiver box etc. There is a cushion and a wooden board on the wooden base of the package, on which the cabinet is placed. Foam is on the two sides and the up side of the cabinet wrapped with a paper ridging box fixed by package strip.

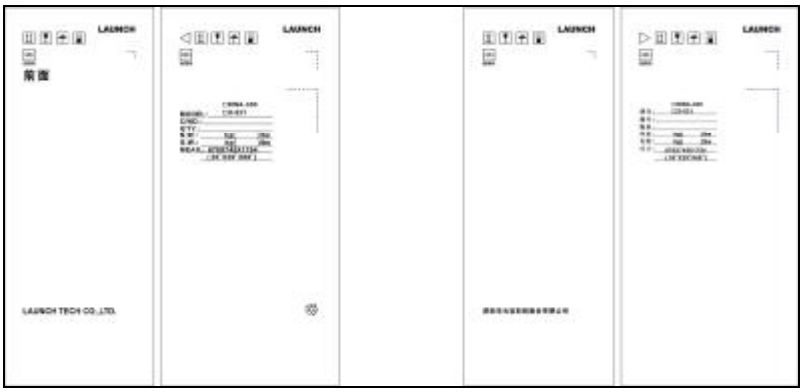

Fig.1.1

Unpacking procedures:

- Loosen all the package strips by a pair of scissors.
- Remove the up side of the cabinet and take out the foam beside it.
- Remove the cabinet from the wooden base. Now you can debug the PC set.

Note: Keep the package box and packing materials for future use.

Remove the Accessory Box

The accessory box is 1235mm×555mm×920mm. It contains a printer, a wheel clamp bracket, two probe rods, a steering wheel holder, a brake pedal depressor and two mechanical turntables. In the paper package box, the honeycomb paper wraps the panel and the multilayer paper is on the four corners.

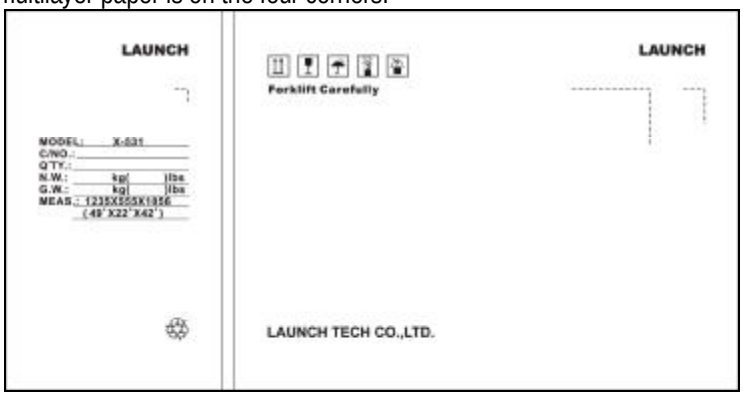

Fig.1.2

Unpacking procedures:

- Loosen all the package strips by a pair of scissors.
- Remove the cover of the box, the multilayer on the four corners and the board around .
- Take out the filling paper on the up side of the box.
- Take out the packing box of the printer.
- Take out the steering wheel holder and the brake pedal depressor.
- Take out two packing box of the two probe rods.
- Take out the packing box of the four wheel clamps.

Installation and Debugging

Install the Main Unit

- Place the cabinet to a suitable place and leave enough space for installation. Open the door on the lower part of the cabinet, and open the drawer. And you can see the User's Manual, Parts Manual, Packing List, etc. Please keep them well.
- Place the mouse and the keyboard on the keyboard drawer. Lead the cables respectively to the computer.
- Unpack the packing box of the monitor, place the related materials well and install the monitor. Lead the cable to the computer through the hole on the back of the cabinet. Plug the power plug into the connection board on the lower layer inside the cabinet.
- Unpack the packing box of printer, place the related materials well and install the printer. Lead the printer USB data cable to the computer. Install the ink cartridge. Plug the power plug of the printer power cable into the power supply socket board on the lower layer inside the cabinet.
- Install the antenna.
- Lock the front and rear doors of the cabinet at last. The installation of main unit is complete.

Debugging of the Main Unit

- Debug the main unit before operating the wheel aligner.
- Connect the main power cable to the power socket, press down the indicator switch on the left in the middle of the cabinet to power the main unit.
- Press down the power switch to start the computer. Enter the WINDOWS2000 operation system.
- Press down the power switch of the printer. Print the test page to see if it is normal.
- The debugging of main unit is successful if all the above steps are normal. Exit WINDOWS2000 and shutdown the computer.

Link Debugging

- Drive the vehicle onto the lift or over the pit, so that the front wheels are at the centers of the turntables; Apply hand brake to ensure human safety. To prevent the turntable from turning, lock the turntables with the lock pins before driving the vehicle; release the lock pins after the vehicle is placed well.
- Install the wheel clamp on the wheel and turn the knob to lock the wheel clamp. The claws of the wheel clamp should be fixed on the external or internal edge of the rim according to the practical condition. Ensure equal depth for each claw and avoid attaching it on the distorted area. Use the tie to bind the wheel clamp to the wheel rim to avoid falling accidentally.
- Install the probe rods on the corresponding wheel clamps according to the specified position through the slide bars of the wheel clamps (Fig.2.1). The connection of the front right wheel is as shown in Fig.2.1.

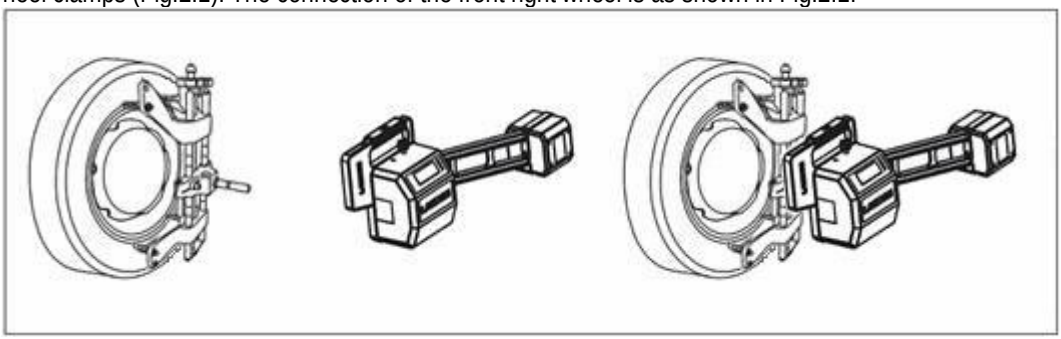

Fig.2.1

- Level the probe rod by adjusting the bubble in the level gauge to the center position.
- Place the steering wheel holder on the driver seat; and press the handle to lock the steering wheel.
- Put the brake pedal depressor between the brake pedal and the driver seat to keep the brake applied.
- Restart the computer and enter the WINDOWS2000 operating system. Click the icon of X-531 Wheel Aligner program to run the program. The screen will display the main function menu. Please read the user's manual for detailed operation instructions.

Structure

Overall Structure

The X-531 wheel aligner mainly consists of main unit, probe rods, wheel clamps, turntables, steering wheel holder and brake pedal depressor, etc. as shown in the Fig.3.1.

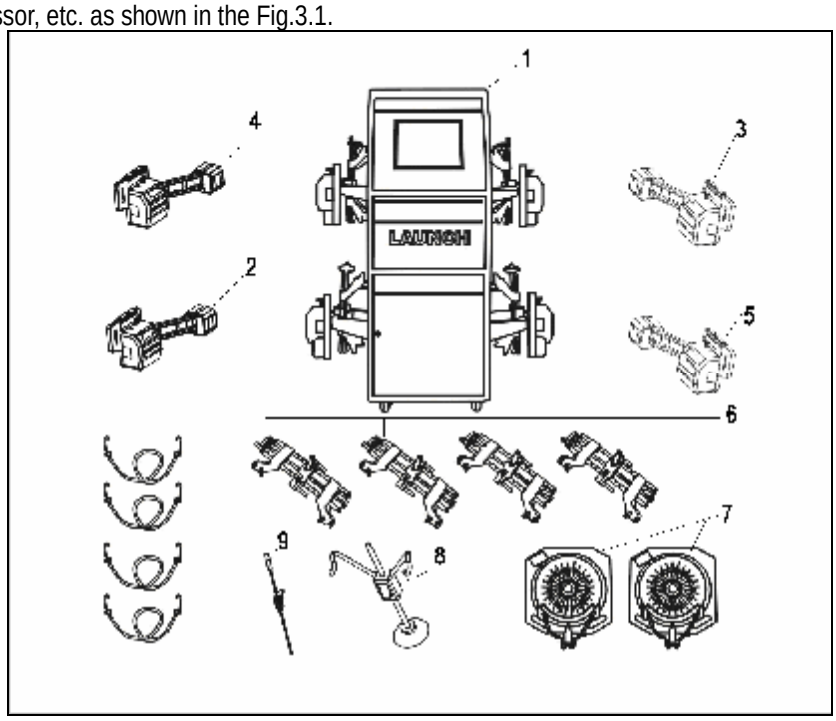

Fig.3.1

1— main unit, 2—LR probe rod assembly, 3—LF probe rod assembly, 4—RF probe rod assembly, 5—RR probe rod assembly, 6—wheel clamps, 7—turn tables, 8—steering wheel holder, 9—brake pedal depressor.

Main Unit

The main unit consists of cabinet, computer, interface circuit, power source, etc. as shown in the Fig.3.2.

The computer assembly includes computer main unit, display, keyboard, mouse, and printer. The display is on the upper layer of the cabinet. Keyboard and mouse are on the keyboard drawer of the cabinet. Printer is on the drawer of the middle layer. The computer main unit is on the bottom layer.

The interface circuit includes the radio main emitter box, which is on the middle layer of the cabinet.

The power supply assembly includes power lead, power socket, switch, and switch power. The power switch is at the right sideboard of cabinet. The power lead is at the rear of the lower compartment inside the cabinet. The power socket is at the spacer board and near to the sideboard. The switch power is on the sideboard of the cabinet.

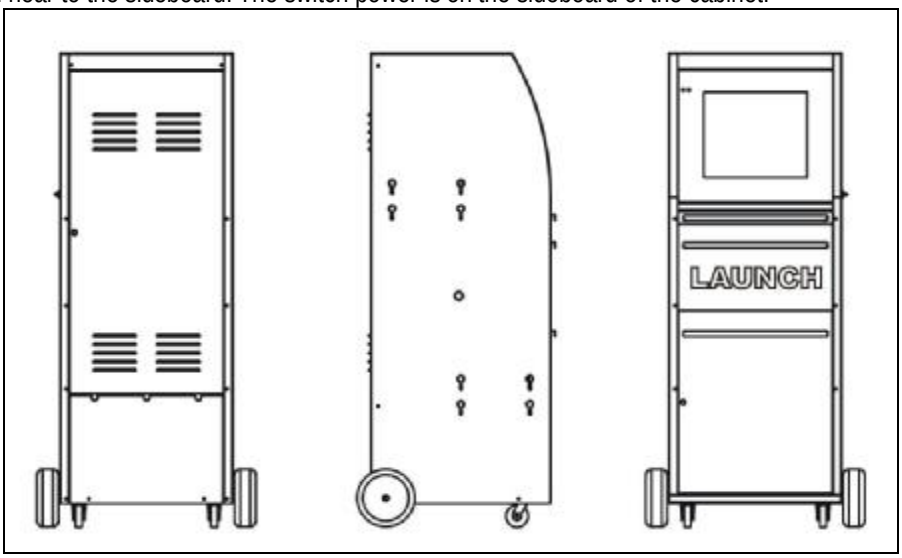

Fig.3.2

Probe Rods

X-531 is equipped with four probe rods. They are LF, LR, RF and RR probe rods, as shown in Fig.3.3. The front probe rods can be interchanged with the rear probe rods at the same time, but cannot be changed. If one of the probe rods is changed, all of the four probe rods should be re-calibrated.

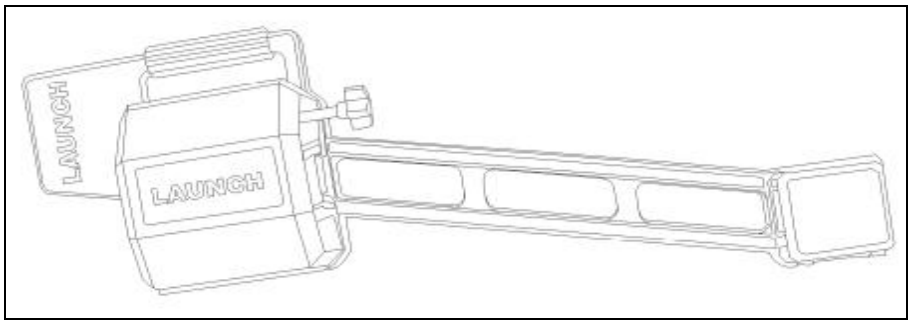

Fig.3.3 probe rod

Each probe rod is equipped with two CCD sensors respectively at the middle and at end and with a radio frequency receiver at the middle. The CCD sensor picks up the light spots and transmits it to the computer through the radio frequency emitter. The computer processes the received signal.

The probe rod is a precision component; please handle it with care to ensure measuring accuracy.

Wheel Clamps

X-531 has 4 wheel clamps (see Fig.3.4).

Turn the adjusting knob to adjust the span between wheel claws, and then attach the clamp to the wheel rim. Adjust the knob to make the wheel clamp fixed on wheel rim tightly. Use the wheel clamp tie to bind the wheel clamp and the wheel rim together.

The installation of wheel clamp is crucial to the test result. The claws should be in even contact with the wheel rim without touching the lead weight.

Avoid hitting during operation. Otherwise, distortion may be caused and the test result may be influenced.

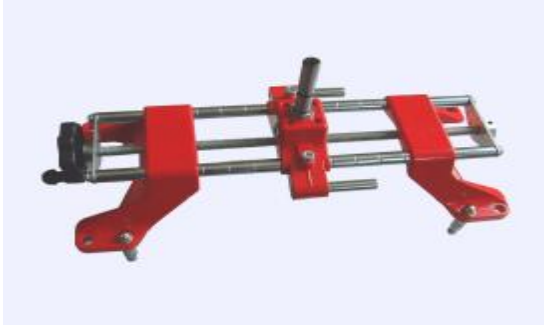

Fig.3.4

Wheel Clamp Hanging Brackets

X-531 wheel aligner is equipped with 4 wheel clamp hanging brackets as shown in Fig.3.5.

Fig.3.5

After unpacking, it is necessary to install these 4 hanging brackets on left and right side wall of the cabinet.

Turntables

X-531 has two mechanical turntables (standard configuration, see Fig.3.6).

Fig.3.6 mechanical turntables

When testing, the turntables should be placed at the front wheel position of vehicle on the lift.

Use the lock pin to lock the turntable before driving the vehicle on. Pull out the lock pin after the vehicle is stopped and the front wheels are at the center of the turntables.

While testing, try your best to keep the vehicle front wheel at the center of the turntable.

When using the electronic turn table, connect its connecting cable to 3PIN socket in the middle of the front left or front right probe rod.

Steering Wheel Holder

X-531 has a steering wheel holder as shown in Fig.3.7. Use the steering wheel holder to lock the steering wheel according to the tips on the screen.

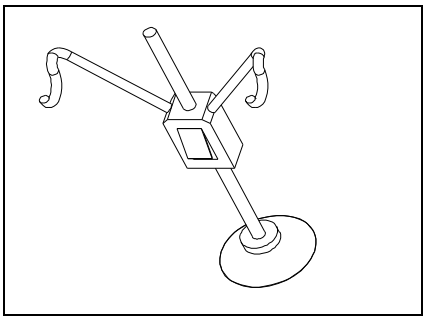

Fig.3.7 Steering wheel holder

Brake Pedal Depressor

X-531 has a brake pedal depressor as shown in Fig.3.8. It is used to hold the brake pedal down.

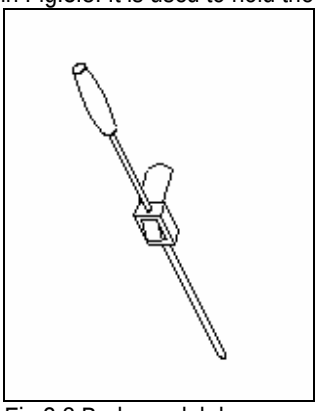

Fig.3.8 Brake pedal depressor

Part List

Part List

Item	ERP No.	Part name	Qty
1	Y103260157	Cabinet of X-531 wheel aligner	1
2	108020002	Monitor	1
3	108030020	Industrial computer	1
4	108010003	Color ink jet printer	1
5	X108020008	keyboard	1
6	X108020009	mouse	1
7	Z205010380	Radio main emitter receiver box	1
8	206010311	LF probe rod assembly	1
9	206010311	RF probe rod assembly	1
10	206010311	LR probe rod assembly	1
11	206010311	RR probe rod assembly	1
12	103250001	Wheel clamp	4
13	103201518	Mechanical turntable	2
14	107010698	User's manual of X-531 wheel aligner	1
15	107010699	Installation and parts manual of X-531 wheel aligner	1
16	107010710	X-531 Wheel Aligner Service Manual	1
17	107010711	X-531 Wheel Aligner Operation Manual	1
18	107010086/88	X-531 Wheel Aligner After Sale Service Manual (CN/EN)	1
19	103260019	Brake pedal depressor	1
20	103260020	Steering wheel holder	1
	102210048	9V switch power supply	1